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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/887,751	06/22/2001	Steven S. Kantner	55980USA1B.004	7737
7590 12/23/2003			EXAMINER	
Attention: Robert W. Sprague Office of Intellectual Property Counsel 3M Innovative Properties Company P.O. Box 33427			YU, GINA C	
			ART UNIT	PAPER NUMBER
			1617	· ·
St. Paul, MN 55133-3427		•	DATE MAILED: 12/23/2003	

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)				
Office Action Summan	09/887,751	KANTNER ET AL.				
Office Action Summary	Examiner	Art Unit				
	Gina C. Yu	1617				
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply						
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).  - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).						
1) Responsive to communication(s) filed on	<del>_</del> ·					
2a) This action is <b>FINAL</b> . ¹ 2b)⊠ Thi	s action is non-final.					
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims						
4) Claim(s) <u>1-13,15,17 and 18</u> is/are pending in the	ne application.					
4a) Of the above claim(s) is/are withdrawn from consideration.						
5) Claim(s) is/are allowed.						
6) Claim(s) 1-13, 15, 17, 18 is/are rejected.						
7) Claim(s) is/are objected to.						
8) Claim(s) are subject to restriction and/or	election requirement.					
Application Papers						
9) The specification is objected to by the Examiner.						
10) The drawing(s) filed on is/are: a) □ accepted or b) □ objected to by the Examiner.						
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).						
11)☐ The proposed drawing correction filed on is: a)☐ approved b)☐ disapproved by the Examiner.						
If approved, corrected drawings are required in reply to this Office action.						
12)☐ The oath or declaration is objected to by the Examiner.						
Priority under 35 U.S.C. §§ 119 and 120						
13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).						
a) ☐ All b) ☐ Some * c) ☐ None of:						
1. Certified copies of the priority documents have been received.						
2. Certified copies of the priority documents have been received in Application No						
<ul> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>						
14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).						
<ul> <li>a) ☐ The translation of the foreign language provisional application has been received.</li> <li>15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.</li> </ul>						
Attachment(s)						
Notice of References Cited (PTO-892)     Notice of Draftsperson's Patent Drawing Review (PTO-948)     Information Disclosure Statement(s) (PTO-1449) Paper No(s)		(PTO-413) Paper No(s) atent Application (PTO-152)				
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#### **DETAILED ACTION**

Receipt is acknowledged of Amendment filed November 22, 2003. Claims 1-13, 15, 17, 18 are pending. The finality of the previous Office action dated September 16, 2003 is withdrawn in view of further consideration. New rejections are made.

## Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-13, 15, 17, and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In this case, examiner views that the newly added limitation in claim1 the at least one copolymer is dispersed "as discrete particles" in the recited carrier, solvent, or vehicle component.

Claim 17 recites that the copolymer has Tg of less than 19 °C. While the specification provides that the monomers used in the polymerization have Tg in such range, examiner views that the specification does not support the Tg of the *copolymers* as recited in the claim. Applicants' remark that the support is found in specification page 15 was fully considered, however, examiner notes that the disclosure there was

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directed to the process of assessing the Tg of the copolymers, and does not expressly indicate the Tg.

Claims 1-13, 15, and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In this case, examiner views that the there is no enabling disclosure for making a composition comprising the "rapid evaporating solvents" present in the composition along with the copolymer particles wherein the copolymers are dispersed discretely from the solvent.

Factors to be considered in determining whether any necessary experimentation is "undue" include, but are not limited to: the breath of the claims; the nature of the invention; the state of the prior art, the level of one of ordinary skill; the level of predictability in the art; the amount of direction provided by the inventor; the existence of working examples, and the quantity of experimentation needed to make or use the invention based on the content of the disclosure. See <u>In re Wands</u>, 858 F.2d 731, 737, 8 U.S.P.Q. 2d 1400, 1404 (Fed. Cir. 1988).

The claimed invention is Applicants' disclosure fails to enable the claimed composition comprising the recited volatile solvents "hexamethyldisiloxane, cyclic silicones, acetone, and hydrofluoroethers, or combination or thereof". While applicants

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disclose the method of removing non-water-miscible solvent from the copolymer by using a rotary evaporator and then dissolving the resulting copolymer in a water-miscible solvent, the reference does not reasonably enable a skilled artisan to make a composition which comprises the recited solvents present in the instant claims and yet completely separated from the copolymer particles. Examiner views that either the solvent is removed or still present in the composition with the resulting copolymer. it is not clear how the copolymer particles can be "discretely dispersed" in the carrier, solvent, or vehicle, which also contains the solvent. There is no guidance either in the specification or in prior art for a skilled artisan to make a composition which contains the copolymer and the recited volatile solvent which are separated from each other. Undue experimentation is necessary to determine the efficacy of the claimed invention.

## Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1-8, 10-13, 15 and 18 are rejected as being unpatentable over Bolich, Jr et al. (US 5662892) ("Bolich").

Bolich teaches hair styling/conditioning compositions containing the copolymers of C1-C18 alkyl esters of acrylic or methacrylic acid in aqueous carrier. See abstract. The monomers of instant claim 1(a)(i) such as n-butyl (meth)acrylate in the amount of 10-95 wt %; and the monomers of instant claim 1(a)(ii) such as cyclohexyl acrylate or isobornyl (meth)acrylate are used in the amount of 10-50 wt %. See col. 4, line 47 – col. 5, line 30; col. 5, lines 34-46; instant claims 1-3. The additives of instant claim 12,

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including thickeners, surfactants and silicone and oil conditioning agents, are disclosed in col. 7, line 55 - col. 21, line 56. The reference further teaches that the linear copolymers form a film having a Tg of at least about 30 °C so that they are not unduly sticky or tacky to the touch. See col. 3, line 64 - col. 4, line 4. See instant claim 18. The aqueous carrier of instant claim 1, such as water, ethanol and propanol are discussed in col. 7, lines 17 - 59. The reference further teaches using solvents such as C10-C16 hydrocarbon, silicone derivatives, ethers, and isododecane being most preferred. See col. 6, line 28 - col. 7, line 25. The reference teaches using decamethyl cyclopentasiloxane in a composition, which meets the "cyclic silicone" limitation. See Example 7. The reference states, "[t]he preferred compositions are in the form of a discontinuous phase of dispersed droplets or particles of the copolymer and the hydrophobic volatile solvent distributed through out the carrier." See col. 7, lines 47 - 50; instant claims 1 and 18.

The reference teaches that the invention is applicable in cream or lotion formulation. See col. 7, lines 56 - 59. See instant claim 9.

As for instant claims 6 –8, examiner takes the position that, since Bolich discloses the composition having the same limitation of the instant claims, the undisclosed measurement of the tack or flexibility test value of the film formed by the composition and the average particle size of the copolymer, are characteristics that naturally flow from the prior art invention. There is nothing in the record to indicate that the Bolich invention is patentably distinct from the present invention.

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2. Claims 1-5, 9, 11, 12, and 18 are rejected as being unpatentable over Mougin (US 6126929) in view of Bolich.

Mougin teaches cosmetic or dermatological compositions comprising a film-forming polymer particles. See abstract. The reference teaches that particularly preferred polymers are crosslinked copolymers of at least one linear, cyclic or brached C1-C89 alkyl methacrylate of acrylic acid and/or of methacrylic acid. See col. 4, lines 54-67. See instant claims 4 and 5. Monomers such as t-butyl methacrylate, cyclohexyl methyacrylate, and isobornyl acrylate are taught. See instant claims 2 and 3. The weight ratio of the polymers in the copolymer composition comprising a hydrophilic monomer such as acrylic acid is generally taught in Example 2. See instant claims 4 and 5. The application of the film-forming composition in mascara composition is also taught in Examples 3-5 and 7-13. See instant claim 12. Example 6 teaches that the invention is also applicable in hair styling composition. The Tg of the polymer is said to be in the range of from 25 °C to – 50 °C. See col. 3, lines 17 - 22. See instant claims 11.

While Mougin generally teaches the condition of the film-forming copolymers as recited in the instant claims, the reference fails to teach specifically combining the polymers in instant claim 1(a)(i) and (ii).

Bolich, discussed above, teaches Bolich teaches hair styling/conditioning compositions containing the copolymers which meet the limitation of instant claim 1(a). The reference further teaches that the linear copolymers form a film having a Tg of at

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least about 30 °C so that they are not unduly sticky or tacky to the touch. See col. 3, line 64 – col. 4, line 4.

Given the general teaching of using film-forming copolymers for mascara or hair styling compositions in Mougin, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have looked to the prior arts such as Bolich for specific suitable copolymers. The motivation to use the Bolich copolymers would have been obvious to the skilled artisan because he would have expected to successfully produce a film-forming cosmetic composition such as mascara that are not unduly sticky or tacky.

### Response to Arguments

Applicant's arguments with respect to claims 1-13, 15, 17, and 18 have been considered but are most in view of the new ground(s) of rejection.

#### Conclusion

No claims are allowed.

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gina C. Yu whose telephone number is 703-308-3951.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan can be reached on 703-305-1877. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1234.

Gina C. Yu Patent Examiner

SUPERVISORY PATENT EXAMINER

12/15/03